<u>**WHAT IS CLAIMED IS:**</u>

1. A method for providing accelerated loading of an operating system, comprising the steps of:

maintaining a list of boot data used for booting a computer system;

5   preloading the boot data upon initialization of the computer system; and

servicing requests for boot data from the computer system using the preloaded boot data.

2. The method of claim 1, wherein the boot data comprises program code

10   associated with one of an operating system of the computer system, an application program, and a combination thereof.

3. The method of claim 1, wherein the step of preloading the boot data comprises retrieving boot data from a boot device and storing the retrieved data in a cache memory.

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4. The method of claim 3, wherein the method steps are performed by a data storage controller connected to the boot device.

5. The method of claim 1, further comprising the step of updating the list of boot

20   data during the boot process.

6. The method of claim 5, wherein the step of updating comprises adding to the list any boot data requested by the computer system not previously stored in the list.

7. The method of claim 5, wherein the step of updating comprises removing from the list any boot data previously stored in the list and not requested by the computer system.

8. The method of claim 1, wherein the boot data is compressed and further comprising the step of decompressing the preloaded boot data.

9. The method of claim 1, wherein the method steps are program instructions that are tangibly embodied on a program storage device and readable by a machine to execute the method steps.

10. A method for providing accelerated launching of an application program, comprising the steps of:

maintaining a list of application data associated with an application program;

preloading the application data upon launching the application program; and

servicing requests for application data from a computer system using the preloaded application data.

11. The method of claim 1, wherein the application data is compressed and further comprising the step of decompressing the preloaded application data.

12. The method of claim 10, wherein the method steps are program instructions that are tangibly embodied on a program storage device and readable by a machine to

execute the method steps.

13. A boot device controller for providing accelerated loading of an operating

system of a host system, the boot device controller comprising:

5   a digital signal processor (DSP);

         a programmable logic device, wherein the programmable logic device is

programmed by the digital signal processor to (i) instantiate a first interface for

operatively interfacing the boot device controller to a boot device and to (ii) instantiate a

second interface for operatively interfacing the boot device controller to the host system;

10   and

         a non-volatile memory device, for storing logic code associated with the DSP, the

first interface and the second interface, wherein the logic code comprises instructions

executable by the DSP for maintaining a list of boot data used for booting the host

system, preloading the boot data upon initialization of the host system, and servicing

15   requests for boot data from the host system using the preloaded boot data.

14. The boot device controller of claim 13, further comprising a cache memory

device for storing the preloaded boot data.

20   15. The boot device controller of claim 13, wherein the logic code in the non-

volatile memory device further comprises program instructions executable by the DSP for

maintaining a list of application data associated with an application program; preloading

the application data upon launching the application program, and servicing requests for

the application data from the host system using the preloaded application data.

16. The boot device controller of claim 12, wherein the boot data is compressed and wherein the DSP comprises a data compression engine (DCE) for decompressing the

5   preloaded boot data.